

1 ABSTRACT OF THE DISCLOSURE

2 In one aspect, the invention encompasses a method of treating the
3 end portions of an array of substantially upright silicon-comprising
4 structures. A substrate having a plurality of substantially upright silicon-
5 comprising structures extending thereover is provided. The substantially
6 upright silicon-comprising structures have base portions, and have end
7 portions above the base portions. A masking layer is formed over the
8 substrate to cover the base portions of the substantially upright silicon-
9 comprising structures while leaving the end portions exposed. The end
10 portions are then exposed to conditions which alter the end portions
11 relative to the base portions. In another aspect, the invention
12 encompasses a method of treating the ends of an array of silicon-
13 comprising emitter structures. A substrate having a plurality of silicon-
14 comprising emitter structures thereover is provided. The emitter
15 structures have base portions and ends above the base portions. A layer
16 of spin-on-glass is formed over the substrate. The layer of spin-on-glass
17 covers the base portions of the emitter structures and leaves the ends
18 exposed. The ends are then exposed to conditions which alter the ends
19 relative to the base portions. In yet another aspect, the invention
20 encompasses a cathode assembly which includes a plurality of silicon-
21 comprising emitter structures projecting over a substrate. The emitter
22 structures have base portions and ends above the base portions, and the
23 ends comprise a different material than the base portions.